CLAIM LISTING

1.　(Currently amended)　A broadband <u>cable</u> modem termination system for managing data transmissions through a broadband network that interconnects a plurality of end user locations and a head-end <u>via a cable modem which has an upstream component for multi-point end user to single point head-end upstream signaling and a downstream component for single point head-end to multi-point end user downstream signaling</u>, said broadband network comprising a hierarchical network having at least two levels, said broadband <u>cable</u> modem termination system comprising:

downstream <s>data transmission</s> <u>broadband cable modem component</u> means, located at a first level of said hierarchical network, for transmitting data in a downstream direction from a source of program material at said head-end to selected ones of said plurality of end user locations; and

upstream <s>data transmission</s> <u>broadband cable modem component</u> means, located at a second level of said hierarchical network, for transmitting control data received from at least one of said plurality of end user locations in an upstream direction to said head-end, wherein said second level is located downstream of said first level in said hierarchical network.

2.　(Currently amended)　The broadband <u>cable</u> modem termination system of claim 1 wherein said downstream <s>data transmission</s> <u>broadband cable modem component</u> means comprises:

means for converting data received in digital baseband IP format to data in a radio frequency based format for transmission to selected ones of said plurality of end user locations.

3.　(Currently amended)　The broadband <u>cable</u> modem termination system of claim 2 wherein said upstream <s>data transmission</s> <u>broadband cable modem component</u> means comprises:

means for converting data received in a radio frequency based format to data in digital baseband IP format for transmission to said head-end.

Serial No.09/766,736
Amendment And Remarks Responsive To
Office Action Mailed 08/03/04
Page - 2 of 7
71550(v1
PAGE 3/8 * RCVD AT 11/2/2004 12:50:54 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID:+3038610846 * DURATION (mm-ss):02-52

4.   (Currently amended)   The broadband cable modem termination system of claim 1 wherein said downstream ~~data transmission~~ broadband cable modem component means and said upstream ~~data transmission~~ broadband cable modem component means operate independent of each other.

5.   (Currently amended)   The broadband cable modem termination system of claim 1 wherein said upstream ~~data transmission~~ broadband cable modem component means comprises:

means for converting data received in a radio frequency based format to data in digital baseband IP format for transmission to said head-end.

6.   (Currently amended)   A method of operating a broadband cable modem termination system for managing data transmissions through a broadband network that interconnects a plurality of end user locations and a head-end via a cable modem which has an upstream component for multi-point end user to single point head-end upstream signaling and a downstream component for single point head-end to multi-point end user downstream signaling, said broadband network comprising a hierarchical network having at least two levels, said method of operating a broadband cable modem termination system comprising ~~the steps of~~:

transmitting data from a downstream ~~data transmission~~ broadband cable modem component apparatus, located at a first level of said hierarchical network, in a downstream direction from a source of program material at said head-end to selected ones of said plurality of end user locations; and

transmitting control data from an upstream ~~data transmission~~ broadband cable modem component apparatus, located at a second level of said hierarchical network, and received from at least one of said plurality of end user locations in an upstream direction to said head-end, wherein said second level is located downstream of said first level in said hierarchical network.

7.   (Currently amended)   The method of operating a broadband cable modem termination system of claim 6 wherein said step of transmitting data from a downstream ~~data transmission~~ broadband cable modem component apparatus comprises:
    converting data received in digital baseband IP format to data in a radio frequency based format for transmission to selected ones of said plurality of end user locations.

8.   (Currently amended)   The method of operating a broadband cable modem termination system of claim 7 wherein said step of transmitting control data from an upstream ~~data transmission~~ broadband cable modem component apparatus comprises:
    converting data received in a radio frequency based format to data in digital baseband IP format for transmission to said head-end.

9.   (Currently amended)   The method of operating a broadband cable modem termination system of claim 6 wherein said step of transmitting data from a downstream ~~data transmission~~ broadband cable modem component apparatus and said step of transmitting control data from an upstream ~~data transmission~~ broadband cable modem component apparatus operate independent of each other.

10.   (Currently amended)   The method of operating a broadband cable modem termination system of claim 6 wherein said step of transmitting control data from an upstream ~~data transmission~~ broadband cable modem component apparatus comprises:
    converting data received in a radio frequency based format to data in digital baseband IP format for transmission to said head-end.

Serial No.09/766,736
Amendment And Remarks Responsive To
    Office Action Mailed 08/03/04
    Page - 4 of 7

PAGE 5/8 * RCVD AT 11/2/2004 12:50:54 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:3729306 * CSID:+3038610846 * DURATION (mm-ss):02-52